

REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of August 13, 2008 is respectfully requested.

By this Amendment, claims 2, 3, 8 and 9 have been amended. Thus, claims 1-9 are currently pending in the application. No new matter has been added by these amendments.

The entire specification and abstract have been reviewed and revised. Due to the number of revisions, the amendments to the specification and abstract have been incorporated into the attached substitute specification and abstract. For the Examiner's benefit, a marked-up copy of the specification and abstract indicating the changes made thereto is also enclosed. No new matter has been added by the revisions. Entry of the substitute specification is thus respectfully requested.

On pages 2-4 of the Office Action, the Examiner rejected claims 3, 6 and 9 under 35 U.S.C. § 102(b) as being anticipated by Kasuya et al. (JP 10-082402). On pages 4 and 5 of the Office Action, the Examiner rejected claims 3, 6 and 9 under 35 U.S.C. § 102(b) as being anticipated by Tsuji (WO 94/10455). For the reasons discussed below, it is respectfully submitted that the present claims are clearly patentable over the prior art of record.

Independent claims 3 and 9 each recite a hydraulic pressure control device of a construction machine, which includes first and second variable displacement hydraulic pumps, first and second hydraulic actuators, a first merging/separating valve, a second merging/separating valve, a necessary flow rate calculation means that calculates necessary flow rates to be supplied to the first and the second hydraulic actuators, and determination means for determining whether each of the necessary flow rates of the first and the second hydraulic actuators calculated by the necessary flow rate calculation means is less than a maximum discharge flow rate per pump of the first and the second variable displacement hydraulic pumps.

In addition to the above, independent claim 3 recites *control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the merge position to the separation position, when the first merging/separating valve and the second merging/separating valve are in the merge position and the determination means determines that each of the necessary flow rates of the first and the second hydraulic actuators is*

less than the maximum discharge flow rate per pump of the first and the second variable displacement hydraulic pumps.

In this regard, independent claim 9 recites control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the separation position to the merge position, when the first merging/separating valve and the second merging/separating valve are in the separation position and the determination means determines that at least one of the necessary flow rates of the first and the second hydraulic actuators is the maximum discharge flow rate or more per pump of the first and the second variable displacement hydraulic pumps.

Kasuya discloses a hydraulic drive device in which changeover valves 14a, 14b are switched between a joining position and a branching position by a changeover control circuit 200. However, Kasuya does not disclose *control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the merge position to the separation position, when the determination means determines that each of the necessary flow rates of the first and the second hydraulic actuators is less than the maximum discharge flow rate per pump of the first and the second variable displacement hydraulic pumps*, as required by independent claim 3, or *control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the separation position to the merge position, when the determination means determines that at least one of the necessary flow rates of the first and the second hydraulic actuators is the maximum discharge flow rate or more per pump of the first and the second variable displacement hydraulic pumps*, as required by independent claim 9.

Rather, Kasuya discloses that the control circuit 200 controls the switching of the changeover valves between the joining and branching positions based on whether the hydraulic pumps 1 and 6 are in a “saturation state” (paragraph [0101]), or based on whether the hydraulic pump reaches a “maximum tilt position” (paragraph [0022]), and therefore does not disclose control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the merge position to the separation position, when the determination means determines that each of the necessary flow rates of the first and the second

hydraulic actuators is less than the maximum discharge flow rate per pump of the first and the second variable displacement hydraulic pumps, as required by independent claim 3, or control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the separation position to the merge position, when the determination means determines that at least one of the necessary flow rates of the first and the second hydraulic actuators is the maximum discharge flow rate or more per pump of the first and the second variable displacement hydraulic pumps, as required by independent claim 9. Therefore, it is respectfully submitted that Kasuya does not anticipate either of independent claims 3 and 9.

Tsuji discloses a flow dividing and combining switching device which includes a switching valve 14 between discharging pipe lines 11 and 12 of respective variable capacity hydraulic pumps 1 and 6. However, Tsuji does not disclose *control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the merge position to the separation position, when the determination means determines that each of the necessary flow rates of the first and the second hydraulic actuators is less than the maximum discharge flow rate per pump of the first and the second variable displacement hydraulic pumps, as required by independent claim 3, or control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the separation position to the merge position, when the determination means determines that at least one of the necessary flow rates of the first and the second hydraulic actuators is the maximum discharge flow rate or more per pump of the first and the second variable displacement hydraulic pumps, as required by independent claim 9.*

In this regard, Applicants provide the following translation of page 7, lines 4-7 of Tsuji, which states:

Each discharging volume control means is controlled on the basis of the average value of the discharging hydraulic pressures P_{P1} , P_{P2} of the first pump 1 and the second pump 6, and the pressure difference between the maximum hydraulic pressure P_{LS1} of each actuator and the discharging hydraulic pressure P_{P1} of the first pump 1 or the pressure difference between the maximum hydraulic pressure P_{LS2} of each actuator and the discharging hydraulic pressure P_{P2} of the second pump 6.

Further, Applicants provide the following translation of page 11, lines 10-23 of Tsuji, which states:

Instead of the method in which the controller 17 switches the separating/merging switching valve 14 and the load sensing pressure switching valve 41 on the basis of each operation lever 26, 26 operated by the operator, it may be possible to employ a method in which the separating/merging switching valve 14 and the load sensing pressure switching valve 41 are switched on the basis of the magnitude of the discharging pressure of the first pump 1 and the second pump 6 or load pressure added to each of the actuators 2, 3, 7, 8 to perform the control without the pressure loss caused by each of the pressure compensation valves 43, 44, 45, 46, because the load pressures of the actuators 2, 3, 7, 8 are substantially equal. In other words, the first pump 1, the second pump 6, or each of the actuators 2, 3, 7, 8 is equipped with a pressure sensor, which is not shown; and, once the output signal of each of the pressure sensors is input to the controller 17, the controller 17 compares the load pressure applied to the first pump 1, the second pump 6, or each of the actuators 2, 3, 7, 8 with the preset pressure value. When the pressure difference between the load pressures of the first pump 1 and the second pump 2, or the pressure difference among the actuators 2, 3, 7, 8 exceeds the preset pressure value, an instruction to separate the flow is output to the separating/merging switching valve 14 and the load sensing pressure switching valve 41 through the electromagnetic switching valve 15.

Thus, Tsuji discloses that a controller 17 controls the switching of the switching valve based on an average value of the hydraulic pressure or a pressure difference detected by a pressure sensor attached to the pumps 1 and 6, and therefore does not disclose control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the merge position to the separation position, when the determination means determines that each of the necessary flow rates of the first and the second hydraulic actuators is less than the maximum discharge flow rate per pump of the first and the second variable displacement hydraulic pumps, as required by independent claim 3, or control means that controls a switching of the first merging/separating valve and the second merging/separating valve from the separation position to the merge position, when the determination means determines that at least one of the necessary flow rates of the first and the second hydraulic actuators is the maximum discharge flow rate or more per pump of the first and the second variable displacement hydraulic pumps, as required by independent claim 9. Therefore, it is

respectfully submitted that Tsuji does not anticipate either of independent claims 3 and 9.

Therefore, it is respectfully submitted that independent claims 3 and 9, as well as claim 6 which depends therefrom, are clearly allowable over the prior art of record.


Further, it is noted that on page 6 of the Office Action, the Examiner indicated that claims 1, 2, 4, 5, 7 and 8 are allowed. Therefore, it is respectfully submitted that claims 1-9 are clearly in condition for allowance.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice to that effect is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

Junsei TANAKA et al.

By: 
Walter C. Pledger
Registration No. 55,540
Attorney for Applicants

WCP/lkd
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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